Summary, Conclusions and Suggestions

This chapter sums up this research study, discusses the hypotheses, conclusions and implications of the results and offers suggestions for future research.

7.1 Summary

Organizations world over are under tremendous pressures due to both internal and external environmental factors not only for their performance but even for survival. The globalisation of the markets are ushering in intense competition in the developing countries due to the entry of global corporations and this in turn is threatening the market equilibrium and forcing the existing organizations to rapidly gear up and upgrade their technological levels as well as spruce up the customer service departments to the international level if they wish to survive.

Organizational orientation, as a part of organizational culture, is an important component that can aid or deter the technology up-gradation process and requires intervention strategies to be deployed by management to make the process smooth and achieve implementation success. Organizations tend to have a mix of orientations but generally one of them dominates all the activities and processes in the organization. Earlier orientations were of four types only viz., production, marketing, product and sales. Over the years more orientations were identified and added to the literature. These included technology, service, cost, customer orientations etc.
For this study the organizational orientation chosen is the technology orientation, the definition of which was synthesized from the existing literature on corporate culture and organization orientations.

Indian banking industry is undergoing a transformation as it not only has to face global players due to opening of the economy, start the process of conforming to the emerging global standards of Basel etc., fulfil rising customer expectations but also introduce latest technologies fast, rather make technology as a part and parcel of business strategy while continuously assessing and improving its personnel profile and knowledge. Technology orientation might be the key to make this process less painful and this orientation can be strengthened further with management communication of a clear cut vision of strategy and role of technology in achieving that as well as providing the wherewithal for extensive training at all levels.

The challenges ahead for Indian banking industry are varied and include increasing profitability in the environment of increasing competitive intensity. This requires great efforts in adopting new technological innovations, deploying robust risk management systems, enforcing better customer orientation and following a strict code for corporate governance (Purwar, 2003).

To combat these, the emerging market scenario Indian banks have launched a series of initiatives which include large investments in IT, leveraging the branch network, moving aggressively in retail markets of home and personal loans, investing in upgrading skills of its manpower and launching innovative product lines. The information technology adoption process in Indian banks faced tough
times initially due to stiff resistance from the unions but ultimately the opening up of economy and entry of foreign banks and private players has forced every organization to move ahead fast on technology adoption continuum.

The Reserve Bank of India has over the years directly nurtured and guided the IT initiatives of the public sector banks through recommendation of its various committees like Rangarajan committee I & II and Narasmiham committee etc. as well as implementing IT innovations in central bank itself for aggregating information from all banks.

Technological innovations are purported to, enable organizations to compete in the marketplace better, improve the processes and increase profitability over the long run.

As information technology is supposed to be the tool that is essential to fulfil most of the emerging business requirements of the Indian banking industry, most of the banks in India have moved forward on this front backing it up with massive investments on information technology as well as training and reorienting the manpower to the new evolving processes and activities.

The IT initiatives in Indian bank started with spreadsheets and graduated to TBA, connectivity between branches and core banking solutions. Most of the scheduled commercial banks have either implemented TBA or even moved ahead and in some cases straight graduated to core banking solutions of the banking IT continuum.
Information technology adoption models that acted as foundation for this study are Roger’s Diffusion of Innovations model and Davis’ Technology Acceptance Model.

There has not been much empirical research on influence of internal organizational factors on the perceived technology adoption effectiveness in Indian banks. The role of organizational orientation in aiding or deterring the innovation adoption process in Indian banking industry is an important area that has not been addressed fully and gap exists in the literature in this aspect.

In this study, a model was developed on constructs presumed to be relevant to IT adoption effectiveness and the moderating role that technology orientation plays in the whole process. Specifically this study examines the perceived effectiveness of technology adoption processes in Indian banks and how the technology orientation is influencing this process. The overall objective of this research was to determine the IT adoption effectiveness based on relevant independent IT adoption factors by interviewing managers of Indian bank branches and determine if and how the organizational technology orientation is either aiding or deterring this process.

The research hypotheses were formulated keeping in mind the specific relationships in the conceptual framework. Hypothesis 1 deals with the influence of moderator variable “technology orientation” of an organization on the relationship between the independent variable “extent of IT application” in the organization and the dependent variable “perceived organization effectiveness of IT adoption”. Hypothesis 2 concerns the influence of moderator variable
"technology orientation" of an organization on the relationship between the independent variable "organization support" and the dependent variable "perceived organization effectiveness of IT adoption". Hypothesis 3 deals with the influence of moderator variable "technology orientation" of an organization on the relationship between the independent variable "external factors" and the dependent variable "perceived organization effectiveness of IT adoption".

Hypothesis 4 is about the influence of moderator variable "technology orientation" of an organization on the relationship between the independent variable "perceived ease of use" and the dependent variable "perceived organization effectiveness of IT adoption" whereas the Hypothesis 5 concerns the influence of moderator variable "technology orientation" of an organization on the relationship between the independent variable "perceived usefulness" and the dependent variable "perceived organization effectiveness of IT adoption".

Each scale had a Cronbach's coefficient alpha greater than 0.5 indicating sufficient reliability in terms of internal consistency.

7.2 Conclusions and Implications

Results from the study indicate that majority of respondents in the Indian banking industry have either already adopted or are in the process of adopting IT in form of TBA or even more sophisticated software and in the process not only attempting to deliver better service to the customer but even bring efficiency in its internal operations. In the study the majority of respondents confirmed that IT is enabling better customer response, instituting productivity enhancements and even improving the coordination among various departments. The study has also shown
the depth to which IT has percolated in all the processes of the Indian banking industry with 97.5 percent of respondents agreeing with the statement that their organizations are using technology to create value.

As explained in demographics, 54.7 percent of respondents had gone even beyond TBA. The major IT adoption exercise in Indian banking industry happened between years 2000 to 2006. This could be seen in light of the urgent need of Indian banks to survive and adapt to the changing environment. The banking firms started focusing on understanding the drivers of success, like better utilization of its resources (viz., technology, infrastructure and employees), process of delivering quality service to its customers and performance benchmarking. The efficiency of banks became the critical basis to offer an effective competition (Mukherjee et al., 2002).

At this juncture the challenges being faced by the Indian banking industry are in the form of, deregulation leading to increasing competitive intensity requiring flexibility of operations, customers demanding more innovative product offerings and competency gap on the human resource front. With more than 50 percent of respondents confirming the status of IT in their organization as core banking or beyond, it is not surprising that a study has indicated that public sector banks have become more efficient than private and foreign banks. The public banks are catering to a large number of customers spread across the country whereas foreign banks are focusing on niche markets and thus not able to reap the full benefits of the high technology (Mukherjee et al., 2002)
This study confirms that IT has become quite pervasive in the Indian banking industry with majority of respondents confirming that IT has started contributing in decision making process and even improving it. Public sector banks that are moving fast on adopting new concepts in banking, turning tech savvy, becoming more efficient post VRS and getting more autonomous can succeed in effectively taking on the private sector banks by virtue of their sheer size. Foreign banks on the other hand are likely to achieve success in their chosen niche segments and remain the leaders in innovation and technology introduction. The introduction of technology has brought a major change in delivery of services and raised the customer expectations to get fast, efficient and personalized service (Kuppuswamy, 2003).

Kamath et al. (2003) has defined winners in this sector as those players who will have a better understanding of the customer, fulfil their needs better, leverage technology, knowledge, and human resources to make available quality products and services, thus delivering value to all stakeholders. And towards these objectives the role of information technology has been reaffirmed by this research to be of critical nature. As one of the key factor for the success remains improving the competency levels of their human resources and although banks have formal systems, procedures and departments, there is a need to improve the quality of training initiative much beyond the current levels as the study has shown that although majority are satisfied with the quantum of training but less than 50 percent are satisfied with the quality levels of training programs. This will require intervention by top management as their role has been identified as an enabler in the successful adoption of IT in the Indian banking industry.
As predicted the moderator variable “technology orientation” significantly influenced the relationship between “extent of IT application” and “perceived organization effectiveness of IT adoption”. This indicated that the increasing efficiency needs of the banks require successful IT adoption to improve operational efficiency as well as provide better portfolio of products and services in a more personalized manner. A high technology orientation of an organization makes IT pervasive in all organization activities and deepens IT’s impact on organization processes. As borne out by study, it improves the decision making process, enables faster customer response, leads to productivity enhancements, improves coordination amongst different departments and meets employees’ and management expectations.

The relationship between “organization support” and “perceived organization effectiveness of IT adoption” was also significantly influenced by high technology orientation. Organizations with high technology orientation have a more effective internal technical support as well as extensive top management support. High technology orientation also has better IT knowledge and IT expertise ingrained across various levels of the organization. In such organizations employees tend to participate in contributing to IT decisions and the level of cooperation amongst co-workers is generally high.

The new technologies are bound to provide more “perceived ease of use” to the users leading to better assimilation of the new technologies and thus further strengthening the ease of use feeling making it a positive virtuous cycle. This process is strengthened by a high technology orientation of an organization as has been shown in the study. It also makes employees’ jobs easier to perform. The
employees not only enjoy deploying IT in their activities but they even explore and find new ways of doing their jobs.

Similarly the interaction, of “perceived usefulness” and the “perceived organization effectiveness of IT adoption” was seen to be significantly influenced by technology orientation. The study reinforced that high technology orientation impacts more positively on increasing productivity and leads to a greater work control.

External environmental factors’ interaction with perceived organizational effectiveness of IT adoption was also significantly influenced by technology orientation. The technology orientation enables organizations to respond faster to the introduction of new innovations by the various stakeholders in the environment like government entities, trade associations, and competitors and also the mandatory compliances by central banks and world level agreements. The high technology orientation not only helps in a better response but it also makes the adoption process faster and more effective.

7.3 Limitations and Suggestions for Future Study

Based on the results and the limitations of this study, the suggestions for further research have been proposed.

The sample consisted of the respondents who were managerial grade in bank branches who provided their perspective of the IT adoption process in their banks. Hence the results cannot be generalized to all the employee segments of the banks. Future research should also be directed to lower levels of hierarchy within bank branches to include their perceptions and views. This study also did not do any
comparative impact analysis of different orientations. This opens up another area of research for future where more than one orientation can be studied and their impact analysed on the IT adoption process in organizations.

This study excluded regional rural banks; cooperative banks and other non-scheduled commercial banks. In future research when the better data is available for such banks, they also may be included in the sample. This study did not investigate differences between the measured variables with respect to respondent’s demographic characteristics. There may be variations in the subjects with different demographic characteristics leading to different responses and behaviour. Further analysis of measured variables with respect to characteristics such as age and regions is recommended.

The study showed that majority of the respondents has adopted various levels of IT. This provides an opportunity to investigate the different experiences of the banks with different IT solutions and do a comparative analysis with respect to the effectiveness of IT adoption.

Training as shown in the study requires more focus and intervention on the quality aspect. It affords an opportunity for the researchers to evaluate other non formal methods that contribute to training amongst the employees.

As the Indian banking industry was forced to change strategies after the opening of the Indian economy and the deregulation of the sector, a comparative study between before and after would provide interesting knowledge about the migration process and how to mitigate the pains associated with it.
Further research is also warranted about how the other orientations may influence the IT adoption process in the organizations.

This study not only provides a view about the IT adoption effectiveness in the Indian banking industry but also offers an opportunity to the top management to further fine tune the IT adoption process and get more value out of their huge investments. It also gives an indication to the management the factors they must keep in mind to further enhance the effectiveness of IT adoption in their organizations.

Before launching any organization wide IT initiative, better planning can be done with the help of this study by incorporating the parameters listed and measured in the planning process itself.